

AMENDMENTS TO THE CLAIMS

1-14. (Withdrawn)

15. (Currently Amended) An integrated system for monitoring and treating diabetes, the system comprising:

a glucose sensor, wherein the glucose sensor substantially continuously measures glucose in a host for a period exceeding one ~~week~~ day, and outputs a data stream, including one or more sensor data points;

a receiver operably connected to the glucose sensor, wherein the receiver is configured to receive the data stream; and

a medicament delivery device, wherein the delivery device is at least one of physically and operably connected to the receiver.

16. (Original) The integrated system according to claim 15, wherein the glucose sensor comprises an implantable glucose sensor.

17. (Original) The integrated system according to claim 15, wherein the glucose sensor comprises a long-term subcutaneously implantable glucose sensor.

18. (Original) The integrated system according to claim 15, wherein the medicament delivery device comprises a syringe detachably connectable to the receiver.

19. (Original) The integrated system according to claim 15, wherein the medicament delivery device comprises one or more transdermal patches detachably connectable to the receiver.

20. (Original) The integrated system according to claim 15, wherein the medicament delivery device comprises an inhaler or spray delivery device detachably connectable to the receiver.

21. (Original) The integrated system according to claim 15, wherein the medicament delivery device comprises a pen or jet-type injector.

22. (Original) The integrated system according to claim 15, wherein the medicament delivery device comprises a transdermal pump.

23. (Original) The integrated system according to claim 15, wherein the medicament delivery device comprises an implantable pump.

24. (Original) The integrated system according to claim 15, wherein the medicament delivery device comprises a manual implantable pump.

25. (Original) The integrated system according to claim 15, wherein the medicament delivery device comprises a cell transplantation device.

26. (Original) The integrated system according to claim 15, wherein the medicament delivery device is detachably connected to the receiver.

27. (Original) The integrated system according to claim 15, wherein the medicament delivery device is operably connected to the receiver by a wireless connection.

28. (Original) The integrated system according to claim 15, wherein the medicament delivery device is operably connected by a wired connection.

29. (Currently Amended) The integrated system according to claim 15, further comprising a single point glucose monitor, wherein the single point glucose monitor is at least one of physically and operably ~~connected~~ connectable to the receiver.

30. (Original) The integrated system according to claim 29, wherein glucose sensor comprises an enzyme membrane system for electrochemical detection of glucose the single point glucose monitor comprises an enzyme membrane system for electrochemical detection of glucose.

31. (Original) The integrated system according to claim 15, wherein the receiver comprises a microprocessor, and wherein the microprocessor comprises programming for calculating and outputting medicament delivery instructions

32. (Original) The integrated system according to claim 31, wherein the microprocessor further comprises a validation module that validates the medicament delivery instructions prior to outputting the instructions.

33. (Original) The integrated system according to claim 15, wherein the receiver is configured to receive medicament delivery data responsive to medicament delivery for a first time period from the medicament delivery device

34. (Original) The integrated system according to claim 33, wherein the receiver comprises a microprocessor, and wherein the microprocessor comprises programming to determine a host's metabolic response to the medicament delivery by evaluating the sensor data

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points substantially corresponding to delivery and release of the medicament delivery for the first time period.

35. (Original) The integrated system according to claim 34, wherein the microprocessor calculates medicament therapy for a second time period responsive to sensor data and the host's metabolic response to the medicament delivery.

36. (Original) The integrated system according to claim 34, wherein the microprocessor comprises programming to estimate glucose values responsive to glucose sensor data and host's metabolic response.